

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE  
 in its capacity as elected Office

<b>Date of mailing (day/month/year)</b> 11 April 2001 (11.04.01)	
<b>International application No.</b> PCT/SK00/00010	<b>Applicant's or agent's file reference</b>
<b>International filing date (day/month/year)</b> 23 June 2000 (23.06.00)	<b>Priority date (day/month/year)</b> 17 August 1999 (17.08.99)
<b>Applicant</b> KELLYÉR, Juraj	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
 23 February 2001 (23.02.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Antonia Muller Telephone No.: (41-22) 338.83.38
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## PATENT COOPERATION TREATY

From the \*  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

To:

KOVACIK, Stefan  
Jasovska 13/15  
851 07 Bratislava  
REPUBLIQUE SLOVAQUE

Date of mailing  
(day/month/year)

19.11.2001

Applicant's or agent's file reference

...

## IMPORTANT NOTIFICATION

International application No.  
PCT/SK00/00010

International filing date (day/month/year)  
23/06/2000

Priority date (day/month/year)  
17/08/1999

Applicant

KELLYÉR, JURAJ

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

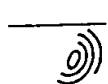
## 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA



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D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
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Authorized officer

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INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

International application No. PCT/SK00/00010

I. Basis of the report

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):
- Description, pages:

1-7 as received on 08/10/2001 with letter of 08/10/2001

Claims, No.:

1-4 as received on 08/10/2001 with letter of 08/10/2001

Drawings, sheets:

1-6 as received on 08/10/2001 with letter of 08/10/2001

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (Under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET

International application No. PCT/SK00/00010

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document/s/:

D1: EP-A-0 602 943 (SONY CORPORATION) 22 June 1994 (1994-06-22)

2. Document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and insofar as this claim can be understood (see Section VIII), this document shows the following features thereof (the references in parentheses applying to this document):

a method for recording, reproducing ... (see Abstract) digital, connected audio and/or video records (cf. Fig. 1A), with a synchronization of ... audio and video recording by the [reference] time of the recording where this ... time of recording serves as the synchronising element for at least one recording sample during its reproduction (see Fig. 10 A).

The subject-matter of claim 1 therefore differs from this known method in that the "real time" of the recording is used in some way whereas D1 applies "reference time data". However, it is unclear whether there is any technical significance in this difference. It should be evident to a skilled person that any reference time can be used for the synchronization of different records. Moreover, D1 already talks about "time stamps" for audio and video data packets.

✓ Thus, in its present vague formulation, the subject-matter of claim 1 is obvious from D1.

- ✓ 3. Dependent claims 2-4 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

The significance of the features of dependent claims 2-3 is unclear. They appear to relate to circumstances only without clear technical limitations.

INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET

International application No. PCT/SK00/00010

Re Item VIII

Certain observations on the international application

The claims are formulated in vague and broad terms leaving the reader in doubt as to the meaning of the technical feature to which they refer, thereby rendering the definition of the subject-matter of said claims unclear (Article 6 PCT). This particularly applies to:

"real time" (The claim lacks a definition of this expression, which is essential for the present invention. It should rather be a signal or data indicating a certain time e.g. the local time)

"... recordings are locally / functionally independent" (too vague since it is not clear whether this relates to the recordings on the recording carrier or to any other technical feature)

...

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

14



Applicant's or agent's file reference ...	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SK00/00010	International filing date (day/month/year) 23/06/2000	Priority date (day/month/year) 17/08/1999
International Patent Classification (IPC) or national classification and IPC H04N5/92		
Applicant KELLYÈR, JURAJ		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
  - ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 14 sheets.

## 3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  23/02/2001	Date of completion of this report  19.11.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Brandenburg, J  Telephone No. +49 89 2399 8027  

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/SK00/00010

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

### Description, pages:

1-7 as received on 08/10/2001 with letter of 08/10/2001

### Claims, No.:

1-4 as received on 08/10/2001 with letter of 08/10/2001

### Drawings, sheets:

1-6 as received on 08/10/2001 with letter of 08/10/2001

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/SK00/00010

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Yes:	Claims	1-4
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-4
Industrial applicability (IA)	Yes:	Claims	1-4
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

## VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/SK00/00010

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document/s/:

D1: EP-A-0 602 943 (SONY CORPORATION) 22 June 1994 (1994-06-22)

2. Document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and insofar as this claim can be understood (see Section VIII), this document shows the following features thereof (the references in parentheses applying to this document):
  - a method for recording, reproducing ... (see Abstract) digital, connected audio and/or video records (cf. Fig. 1A), with a synchronization of ... audio and video recording by the [reference] time of the recording where this ... time of recording serves as the synchronising element for at least one recording sample during its reproduction (see Fig. 10 A).

The subject-matter of claim 1 therefore differs from this known method in that the "real time" of the recording is used in some way whereas D1 applies "reference time data". However, it is unclear whether there is any technical significance in this difference. It should be evident to a skilled person that any reference time can be used for the synchronization of different records. Moreover, D1 already talks about "time stamps" for audio and video data packets.

Thus, in its present vague formulation, the subject-matter of claim 1 is obvious from D1.

3. Dependent claims 2-4 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

The significance of the features of dependent claims 2-3 is unclear. They appear to relate to circumstances only without clear technical limitations.

The additional feature of claim 4 appears to be anticipated by the "time stamps" according to D1, see e.g. column 12.

4. The applicant argued that the essence of the alleged invention is the recording of a real time signal together with another type of recording, for instance audio and video recording. The "real time" in the light of the present specification is a signal or data including the local time of the recording. In D1, a reference time stamp serves for the required synchronization of different types of records such as audio and video. This time stamp is a data indicating a certain point in time. It is not the "real time". The feature that the "real time" is used for the synchronization is not disclosed by D1.

However, the present formulation of claim 1 lacks a definition of the expression "real time" and thus, no special limiting effect can be attributed to the present unclear formulation. Consequently, a lack of inventive step occurs.

A clarification of the expression "real-time" might help to overcome the above objection. On the other hand it must be noted that the time stamps according to D1 in a certain way also represent real time. Although they do not explicitly formulate the time at the location of recording they are in a different format also representative for this time. Therefore, also in a clarified version it is not sure whether the claim would meet the requirements of the PCT with respect to inventive step.

5. For the assessment of the present claims 1-4 on the question whether they are industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. However, due to the technical field of the present claims no reason is apparent that the claimed subject-matter should not be industrially applicable.

#### Re Item VII

Certain defects in the international application

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/SK00/00010

Re Item VIII

Certain observations on the international application

The claims are formulated in vague and broad terms leaving the reader in doubt as to the meaning of the technical feature to which they refer, thereby rendering the definition of the subject-matter of said claims unclear (Article 6 PCT). This particularly applies to:

"real time" (The claim lacks a definition of this expression, which is essential for the present invention. It should rather be a signal or data indicating a certain time e.g. the local time)

"... recordings are locally / functionally independent" (too vague since it is not clear whether this relates to the recordings on the recording carrier or to any other technical feature)

...

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
22 February 2001 (22.02.2001)

PCT

(10) International Publication Number  
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(25) Filing Language: English

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(30) Priority Data:  
PV 1119-99 17 August 1999 (17.08.1999) SK

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(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— *With international search report.*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: METHOD FOR RECORDING, REPRODUCING OR PROJECTING DIGITAL OR ANALOGUE, SAMPLED OR CONNECTED AUDIO AND/OR VIDEO RECORDS

(57) Abstract: The method is based on the fact that, in respect of audio and/or video signal recording, the synchronisation of at least one audio and/or video recording is carried out by means of real time. The real time of recording serves as the synchronising element of at least one image or sound sample during its reproduction or projection. Furthermore, audio and/or video recordings may be locally and functionally independent and may be assigned an identification code.

WO 01/13631 A1

# **Method for Recording, Reproducing or Projecting Digital or Analogue, Sampled or Connected Audio and/or Video Records**

## **Field of the Invention**

The invention relates to recording, reproducing, or projecting digital or analogue, sampled or connected audio and/or video recordings and is characterised by the unique matching of sound with image recordings or of at least two sound or two image records respectively. The invention can be utilised in filmmaking, security, commercial, professional and closed circuit television technology and, primarily, in video technology. Thus, the invention generally relates to recording and reproduction or projection audio and video technology.

## **Prior Art**

At present, analogue VCRs are used on a limited scale in special security or monitoring systems to record image and sound information on continual medium. This automatically matches an image sample with the respective sound sample.

Sampled recording by analogue VCRs only records image information. Recording sound associated with sampled images remains unresolved. Therefore, sound is either not recorded at all or is recorded separately and as such does not lend itself to synchronisation with respective image recordings. Digital VCRs are successfully used in professional filmmaking technology as well as in security and other control systems. Digital VCRs record image information only in the connected continuous recording mode together with sound. Sound and image information is typically recorded on the same recording medium such as HDD (hard disk). Image and sound are synchronised, which is mostly related to the start of recording. However, in the sampling recording mode digital video recorders do not enable to match continuously recorded sound to respective images.

Lastly, in conventional filmmaking technology image and sound are only acoustically synchronised at the beginning using slapstick.

As no method is currently available for applying sound to a separate image recording and as some recording systems are yet to resolve synchronisation of sound and image or of at least two image and two sound recordings respectively, the need has arisen to deal with the problem, ultimately leading to the present invention.

### Substance of the Invention

The method for recording, reproducing or projecting digital or analogue, sampled or connected audio and/or video recordings in accordance with the invention to large extent eliminates the above deficiencies. The substance of the invention is in synchronising at least one audio and one video recording or an audio and audio recording or a video and video recording by means of the real time of recording where, in respect of at least one sample, the real time of recording serves as the synchronising element for reproduction or projection.

The possibilities offered by the above method are further enhanced by the fact that synchronised audio and/or video recordings are locally independent. This means that in a closed or open local system it is possible, within a selected real time interval of a sound recording, to match corresponding image samples from any other closed or open local interior or exterior system.

Another significant feature of an alternative embodiment of the method in accordance with the invention is the option of functional independence of synchronised audio and video recordings. This feature can primarily be utilised when the duration of playback or projection of a sound and image recording differ, including a playback or projection failure.

Lastly, another significant feature of the method in accordance with the invention is the assignment of an identification code to dependent or independent matched audio and video recordings.

The benefits of the method for the playback or projection of digital or analogue sampled or connected audio and/or video recordings consist in the unique matching of image samples and selected sound samples or of at least two image or sound samples respectively. Real time is the moment of a given recording, which is unique and uniquely associated with a given moment and recorded as such during the recording of the audio and video signal. The notion of 'real time' implies a moment of time complete with information about the year, month, hour, minute, second and fractions thereof. Real time is not an information value but a control element (a signal). The method in accordance with the invention solves in a fairly simple fashion the problem of image and sound synchronisation by controlling playback and projection by means of real time rather than by the start of the recording as in conventional systems. For the purposes of this invention: The notion of 'recording as an activity' implies the recording (REC) of image and sound to any recording medium such as magnetic tape and disk, optical disk, hard disk, film tape or a semiconductor chip or other recording media; the notion of 'recording' as an object implies the outcome of recording, i.e. the recording medium already storing image and/or sound information; the notion of 'reproduction' as an activity implies the playing back of recorded image or sound information after it was recorded or the subsequent processing of such information. In sound technology, for example, this relates to the playback of a recorded acoustic signal using reproduction equipment. The same applies to image technology (with the exception of conventional film technology). With regard to conventional film technology, where the recording medium for image and sound information is represented by conventional film tape, with film tape recording image and a separate magnetic tape recording sound, the relevant notion is called 'projection' and is used for the playback of image

signals using specialised reproduction equipment (a film projector). The benefit of the method in accordance with the invention is its simple implementation in digital systems by means of software. In analogue video and television systems, the method can be implemented either entirely or in part by software as well as hardware. In conventional filmmaking technology, the method can only be implemented by means of hardware that inserts time markings in between images, for example, in the form of bar codes, or by using part of the track to record a time value. The method can be beneficially used in sampled recordings, particularly in security systems; however, it can certainly be applied to connected audio and video recordings. Another major advantage consists in easy sound and image synchronisation when a part of data from either the audio or video recording is missing or lost, enabling to continue viewing images. If, for example, the capacity of a recording medium such as one used to record sound is exhausted and the operator does not insert another medium until after a delay, the proposed solution will not require a special start but images will be launched during playback (reproduction) when the sound time mark matches the time mark of the respective image etc. Under the proposed method, images from another recording with a different real time feature will not be launched during playback, as the respective day and time are unique and non-recurrent. The only condition is the matching of the system (real) time of the audio and video systems during recording. As image and sound synchronisation is secured by real time, a selected audio signal can be associated with one or several video recordings, even those that are locally independent. The advantage of the method consists in its versatility as it can be primarily applied in video systems that separately record sound and image. The method, however, can also be used in filmmaking technology (i.e. applied to conventional film) and television technology. An advantage useful in special applications, for example in systems comprising several cameras and several microphones, is the assignment of an identification code to audio and video channel recordings (signals) where an audio recording is matched to the respective pair of video recordings so as to make the playback of several recordings transparent and unequivocal. The method also enables intermittent image recording while sound is recorded continuously. It is maintained that the method in accordance with the invention enables to synchronise an unlimited number of audio and video recordings, including those made at different locations commencing at a different moment in time that is associated with a particular event, i.e. the launching of the recording is not time-dependent and is synchronised during playback as the real time of the recordings match. The recording of any event can be interrupted (for example during scenes not deemed to deserve recording) and restarted later. During playback, the recording will be started again in a synchronised mode as the recorded real time markings are matched.

The method in accordance with the invention can also be used as a monitoring system in government and private businesses.

## **Embodiments of the Invention**

### **Embodiment 1**

This example describes the recording and playback of a single digital sampled audio and video recording by a digital video recorder with a single CCD camera, microphone and monitor. This mode is particularly useful for security or control systems. Image records are sampled at a rate

of one image a minute, with the image record capturing real time information. Sound is recorded in a connected continuous fashion, also capturing real time information. To reproduce image and sound, i.e. to play back the recording, e.g. in order to examine it, the real time of the audio recording selected by the operator serves as the synchronisation signal. Supposing the operator chooses the real time interval from 1999-07-10 18:32:24 to 1999-07-10 18:50:00, then for a selected real time moment during the playback of the required connected sound recording the monitor will gradually display a sequence of 18 images of the monitored space from the selected time interval and associated with replayed sound.

#### **Embodiment 2**

This example describes another mode of recording and playback of a sampled audio and video recording made using a digital recording system with a single CCD or CMOS camera featuring a motion detection function and a microphone. This mode is particularly appropriate in security and surveillance systems. Sound is recorded in a connected (continuous) fashion, as it does not require excessive recording medium capacity. Image is sampled every tenth second or continuously on detecting motion. In this instance, the real time of the audio recording serves as the synchronisation element during playback. In other words, while replaying a time interval, the operator listens to sounds in the surveyed area (such as a conversation between two and more people who remain static). On making a motion, the persons automatically activate the motion detection function and the system continuously records the image, enabling the operator to view an image (moving persons) while continuing to monitor sounds. After the persons become static, the system reverts to sampling at a rate of one image every ten seconds, while the sound continues to be recorded uninterrupted.

#### **Embodiment 3**

This example is derived from Embodiment 2, however, the motion detection function can be replaced by the system operator switching on continuous recording, image being sampled every two seconds and sound recorded in a connected fashion. For example, if a security officer responsible for a secured area views on screen and listens to what goes on in the secured area, the officer has the option of activating continuous image recording to capture in detail the action in a given time interval. During playback, sound is reproduced continuously and image is sampled. Starting at the moment when the officer activated continuous image recording, image is also displayed continuously after which it is sampled again. Sound invariably remains continuous. The advantage is that images, be it sampled or continuously recorded, are synchronised with sound during playback, as an image/images is/are displayed at the moments when recorded real time of image matches the recorded real time of sound.

#### **Embodiment 4**

This example describes an alternative way of recording and playing back several digital locally dependent connected audio and video recordings. In particular, this mode can be used in the film industry, during filmmaking and to create film effects. For example, a unique non-recurring scene is being filmed by four cameras from four angles, recording image and sound and capturing real time. During editing at a later stage, the real time of audio and/or video



recordings serves as the synchronising element, enabling the selection of image and its association with, for example, non-matching sound with identical real time, for example when an image is selected with a different angle of image or sound recording.

#### **Embodiment 5**

This example describes an alternative way of recording and playing back several locally independent digital audio and video recordings. This version is derived from Embodiment 1. Here, the security system has been enhanced, for example by a set of 10 cameras. Sound is recorded by an independent system with six armed microphones built into the monitored nodes of the secured facility. Thus, these systems and their audio and video recordings are functionally independent. Monitoring or examining audio and video recordings enables to survey, by choosing the respective real time of recording, the secured nodes of the facility. A local sound signal with a selected real time can be associated with an image or several images with the same real time but recorded at different locations; it is possible to switch between these images, as all recordings can be played back in a synchronised fashion synchronised using their real time.

#### **Embodiment 6**

This example describes a way of recording and playing back several independent sampled analogue audio and video recordings in closed circuit television systems. In substance, the method is derived from one in Embodiment 5 and adjusted to suit the needs of closed circuit television transmission. Furthermore, the method enables to match audio and video recordings designated using identification codes. The apparent benefit is that the method in accordance with the invention can be implemented in existing closed circuit television networks by means of simple software or hardware modifications.

#### **Embodiment 7**

This example describes a way of recording and projecting analogous connected audio and video recordings in conventional filmmaking technology, where image and sound are optically recorded on conventional film tape. Here, the method in accordance with the invention can be applied, for example by recording, such as by means of bar code or other means, real time information onto film tape in between images or onto the marginal segments of the recording medium, enabling unique matching of image and sound (if recorded separately) or of several image signals.

### **Industrial Applications**

The method of recording, playing back or projecting digital or analogue sampled or connected audio and/or video recordings in accordance with the present invention can be generally applied in every recording and reproduction audio and video system and projection technology.

## CLAIMS

1. Method for recording, reproducing or projecting digital or analogue, sampled or connected audio and/or video records characterised by the synchronisation of at least one audio and video or audio and audio or video and video recording by the real time of the recording where the real time of recording serves as the synchronising element for at least one recording sample during its reproduction.
2. Method for recording, reproducing or projecting digital or analogue, sampled or connected audio and/or video records in accordance with Claim 1 characterised by the fact that synchronised audio and/or video recordings are locally independent.
3. Method for recording, reproducing or projecting digital or analogue, sampled or connected audio and/or video records in accordance with Claim 1 characterised by the fact that synchronised audio and/or video recordings are functionally independent.
4. Method for recording, reproducing or projecting digital or analogue, sampled or connected audio and/or video records in accordance with Claim 1 characterised by the fact that dependent or independent matched audio and/or video recordings are assigned an identification code.

# INTERNATIONAL SEARCH REPORT

Internati Application No

PCT/SK 00/00010

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04N5/92

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 602 943 A (SONY CORPORATION) 22 June 1994 (1994-06-22) the whole document	1,4

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

25 September 2000

Date of mailing of the international search report

02/10/2000

Name and mailing address of the ISA

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Fax: (+31-70) 340-3016

Authorized officer

Verleye, J

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Internati Application No

PCT/SK 00/00010

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 602943 A	22-06-1994	JP 6237437 A	23-08-1994
		AT 173370 T	15-11-1998
		AU 671317 B	22-08-1996
		AU 5238793 A	30-06-1994
		CN 1092197 A	14-09-1994
		DE 69322060 D	17-12-1998
		DE 69322060 T	06-05-1999
		ES 2123035 T	01-01-1999
		US 5502573 A	26-03-1996

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)
PCT/SK 00/ 00010	23/06/2000	17/08/1999
Applicant		
KELLY R, JURAJ		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/SK 00/00010

**A. CLASSIFICATION OF SUBJECT MATTER**

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EPO-Internal

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Information on patent family members

International Application No

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			CN 1092197 A	14-09-1994
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			DE 69322060 T	06-05-1999
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